Local Hazard Mitigation Plan

City of Modesto

E M E R G E N C Y





Local Hazard Mitigation Plan

2010 - 2015

Including Modesto Police Services, Modesto Fire Services, and the Modesto Contract Portion of Industrial Fire Protection District

FINAL DRAFT PLAN 5-YEAR UPDATE

Developed by the Modesto Fire Department in conjunction with:

City of Modesto Community and Economic Development Department

and

Stanislaus County

Approved by Cal-EMA:	
Approved by FEMA:	

Approved and adopted by the Modesto City Council on <u>PENDING</u>

TABLE OF CONTENTS

INTRODUCTION	1
SECTION 1 – PREREQUISITES	3
SECTION 2 - PLANNING PROCESS	5
SECTION 3 - RISK ASSESSMENT	7
Earthquakes	7
FLOODING	9
Dam Failure	10
WILDFIRES	11
LANDSLIDES	12
SECTION 4 – MITIGATION STRATEGY	13
EARTHQUAKES:	
FLOODS:	
DAM FAILURE:	
WILDFIRES:	
LANDSLIDES:	
SECTION 5 – PLAN MAINTENANCE PROCEDURES	
SECTION 6 – ADDITIONAL STATE & FEDERAL REQUIREMENTS	
APPENDICIES	38
PLAN REVIEW CROSSWALK	39
Maps	57
CITY OF MODESTO FACILITIES MAP – EARTHQUAKE HAZARD	58
CITY OF MODESTO FACILITIES MAP – FLOOD HAZARD	59
CITY OF MODESTO FACILITIES MAP - DAM INUNDATION HAZARD #1	60
CITY OF MODESTO FACILITIES MAP – DAM INUNDATION HAZARD #2	62
Modesto Facilities Inventory	64

INTRODUCTION

The Disaster Mitigation Act of 2000 (DMA), commonly known as the 2000 Stafford Act amendments, was approved by congress on October 10, 2000. On October 30, 2000, the President signed the bill into law creating Public Law 106-390. The purposes of the DMA are to amend the Stafford Act, establish a national program for pre-disaster mitigation, and streamline administration of disaster relief. As a result, all government entities are required to have a Local Hazard Mitigation Plan (LHMP). This LHMP allows local entities to receive Federal Emergency Management Association (FEMA) Pre-Disaster Mitigation (PDM) project grants, or to receive post-disaster Hazard Mitigation Grant Program (HMGP) project funding for disasters declared on or after November 1, 2004.

This LHMP covers the City of Modesto including all City Departments and the portion of the Industrial Fire Protection District that currently contracts with the Modesto Fire Department for fire suppression services. The LHMP is presented as a stand-alone document, but works congruently with the city's Emergency Operations Plan (EOP) to help prepare, respond, and mitigate local disasters.

The Federal Register, Interim Final Rule, (IFR) – 44 CFR Part 201, Feb. 26, 2002 defines "Hazard Mitigation" as "Means any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards." FEMA's goal is through the Office of Emergency Services (OES) to "support and assist local and state government and the private sector to integrate all aspects of hazard mitigation." "OES works to maximize the effective use of available public and private resources devoted to hazard mitigation."

The top five natural hazards for Stanislaus County are earthquake, flood, dam failure, wildfire, and landslide (bank erosion/mass wasting). The City of Modesto LHMP covers each of these natural hazards. Additional hazards both natural and manmade will be included as this plan is reviewed and updated.

The Plan must have the following elements to gain approval from FEMA:

- Section 1: Prerequisites This requires the plan to be a multi-jurisdictional plan with multi-jurisdictional involvement in the plan along with adoption by the local governing body.
- Section 2: Planning Process Besides documenting the planning process, we also are required to show public involvement in the plan development.
- Section 3: Risk Assessment This section of the plan includes identifying hazards, profiling hazardous events, and assessing vulnerability. The plan must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.

Introduction Page 1

- Section 4: Mitigation Strategy The LHMP must include a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment. This requires the development of goals to accomplish mitigation, taking into account the jurisdiction's existing capabilities. The mitigation actions must also be prioritized according to a cost-benefit review.
- Section 5: Plan Maintenance Procedures This section requires a formal plan maintenance process to ensure the plan remains an active relevant document. It also includes an explanation of how the mitigation strategies will be incorporated into existing planning mechanisms.
- Section 6: Additional State & Federal Requirements The additional requirements under this section are to ensure Environmental Protection and Historic Preservation is essential components of the LHMP

Section 7: Appendix

Each of these sections and requirements are described in more detail in the Plan.

Introduction Page 2

SECTION 1 – PREREQUISITES

The LHMP is required to have involvement with other jurisdictions in the Modesto area.

REQUIREMENT 1.1 ADOPTION BY THE LOCAL GOVERNING BODY

The local governing body for the City of Modesto is the Modesto City Council consisting of a Mayor and six Council members elected by the citizens of Modesto. The Mayor has organized a committee system consisting of three Council members on each committee. The committees are charged with approving items before they are voted on by the full Council. Once approved by FEMA, the 2010 LHMP will be presented to the Safety and Communities Committee before being brought to the full council for adoption by resolution.

REQUIREMENT 1.2 MULTI-JURISDICTIONAL PLAN ADOPTION

Stanislaus County became the lead in organizing and getting information on developing a LHMP. The County was instrumental in helping to develop this plan by producing the maps and working with their various agencies to gather information on assessed values and technical aspects of producing parts of this plan.

<u>Element A</u>: Does the Multi-Jurisdictional LHMP indicate the specific jurisdictions represented in the plan?

The plan represents the City of Modesto along with the portion of the Industrial Fire Protection District contracted with the Modesto Fire Department, and was developed in conjunction with Stanislaus County.

REQUIREMENT 1.3 MULTI-JURISDICTIONAL PLANNING PARTICIPATION

<u>Element A</u>: Does the Multi-Jurisdictional LHMP describe HOW each jurisdiction participated in the Plans development?

Planning Documentation

The following list is documentation of the various planning meetings that were utilized to review and update the City of Modesto's Local Hazard Mitigation Plan.

1. On August 31, 2009 Fire Chief James Miguel notified Fire Division Chief Mike Payton as the Emergency Coordinator that he would be representing the City of Modesto in updating the plan.

- 2. On October 21, 2009 Division Chief Payton met with Marnie Ardis, Associate Management Consultant with the County's Chief Executive Office to discuss the update of the MJHMP and the next step(s) in the process.
- 3. On October 22, 2009 at the Industrial Fire JPA meeting, the JPA delegated the completion of their Hazard Mitigation Plan to the Modesto Fire Department and the Ceres Fire Department. This responsibility will be divided by emergency response responsibility.
- 4. On January 19, 2010 Mike Payton attended the Planning Process/Risk Assessment Meeting the Board of Supervisors Chambers of 1010 10th Street. At this meeting we reviewed how to organize our plans and discussed the elements of the Planning Process and Risk Assessment.
- 5. On March 12, 2010 Division Chief Payton met with Marnie Ardis, Associate Management Consultant with the County's Chief Executive Office to discuss the update of the MJHMP and the next step(s) in the process.
- 6. On March 30, 2010 Division Chief Payton met with Sergeant Jolene Gonzales of the Modesto Police Department to discuss the MJHMP. Sergeant Gonzales will review and update the police department's specific sections of the plan.
- 7. On April 20, 2010 Division Chief Payton attended the LHMP training at County Center III. This was a joint training session with all county agencies to discuss the "crosswalk" section of the LHMP.
- 8. On May 4, 2010 division Chief Payton met with Will Crew, Chief Building Official with the City of Modesto. This meeting was to discuss the mitigation actions that have been completed through the adoption of the 2007 California Building Codes and the implementation of new actions.
- 9. On May 6, 2010 Division Chief Payton met with Cindy van Empel, Senior Planner with the City of Modesto. This meeting was to discuss the mitigation actions that have been completed through the adoption of the 2008 Urban Area General Plan.
- 10. On May 27, 2010 Division Chief Payton met with Marnie Ardis, Associate Management Consultant with the County's Chief Executive Office to discuss the update of the MJHMP. This meeting was to discuss mitigation actions and strategies.
- 11. On June 2, 2010 Division Chief Payton met with Cindy vanEmpel, Senior Planner with the City of Modesto. This meeting was to discuss the mitigation actions that have been completed through the adoption of the 2008 Urban Area General Plan.
- 12. On Jue 18, 2010 Division Chief Payton met with Deborah Espinoza, Administrative Analyst with the City of Modesto to develop the final published version of the LHMP.

SECTION 2 - PLANNING PROCESS

This section identifies the various DMA 2000 regulatory requirements as well as the identification of key stakeholders and planning team members for the City of Modesto.

REQUIREMENTS:

- 1. An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval
- 2. An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process.
- 3. Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information. Requirement 201.6 (c) (1): the plan shall document the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

<u>Element A</u>: Does the plan provide a narrative description of the process followed to prepare the plan?

The process followed, to prepare the updated plan, included getting assistance from Stanislaus County. Marnie Ardis, Project Manager with Stanislaus County started with informational meetings and distributing the development guide. Additional meetings were held to further refine the project and gather information on each of the sections. We utilized the County Assessor's information to determine infrastructure value. This worked for everything except government owned facilities. We were able to obtain an individual property schedule with insured values for City owned facilities from the City of Modesto Risk Management Division. This information is provided with assigned assessor numbers so it could be plotted on the map.

<u>Element B</u>: Does the plan indicate who was involved in the planning process?

This updated plan has been developed utilizing both City of Modesto staff and Stanislaus County staff as follows:

- 1. Mike Payton, Division Chief, City of Modesto
- 2. Cindy Van Empel, Senior Planner, City of Modesto
- 3. Jolene Gonzales, Police Seargent, City of Modesto
- 4. Will Crew, Chief Building Official, City of Modesto
- 5. Mary Akin, Risk Management, City of Modesto
- 6. Deborah Espinoza, Administrative Analyst II, City of Modesto
- 7. Marnie Ardis, Project Manager, Stanislaus County

<u>Element C</u>: Does the plan indicate how the public was involved?

The update of the Local Hazard Mitigation Plan has been posted on the City of Modesto web-site which also provides a link to Stanislaus Count's web-site. The effort for both notification and community participation has been a county-wide effort.

<u>Element D</u>: Was there an opportunity for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning process?

With the County's leadership, we have participated at County meetings where all agencies in Stanislaus County have been informed and invited to participate.

<u>Element E</u>: Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?

The City of Modesto has an Urban Area General Plan, a Multi-Hazard Functional Plan and an Emergency Response Plan that were used to incorporate appropriate information into the LHMP. Additionally, we use the expertise of Stanislaus County personnel to develop both the maps and information on property values.

SECTION 3 - RISK ASSESSMENT

For the purpose of this plan, we initially identified five natural hazards. The following identifies and profiles each individual hazard along with a vulnerability overview.

Earthquakes

There are several faults known to exist within Stanislaus County. In the extreme eastern parts of the County, the Bear Mountain and Melones faults are found, though believed to have been inactive for the past 150 million years. No faults are currently known to exist within the valley portion of the County. Within the Diablo Range, the most recent movements were along the Tesla-Ortigalita fault approximately five million years ago, although earthquake activity without surface fracturing or faulting is still common. Since 1930, one earthquake epicenter of a magnitude greater than 4.0 on the Richter Scale was recorded in Stanislaus County. On June 27, 1986 an earthquake with a magnitude of 3.7 on the Richter Scale occurred with an epicenter several miles west of Crows Landing. Future earthquakes of similar or greater magnitudes can be expected. The map on page 8 indicates the location of known faults in Stanislaus County.

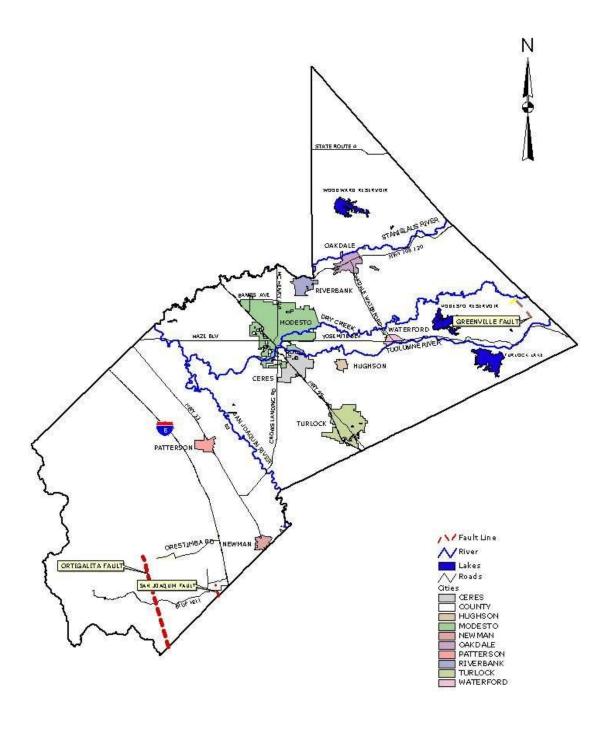
Numerous earthquakes occur each year along California's major faults, which are the San Andreas, Calaveras, Hayward and the Nacimento faults. Information furnished by the State Department of Mines and Geology and the State Office of Emergency Services indicate that ground shaking along these faults can produce damage within the County to reach varying intensities rated on the Modified Mercalli Intensity Scale of 1931. The eastern half of the County can be expected to have shaking to an intensity of VI or VII, producing minor to moderate damage. The western half of the County can expect to receive shaking to an intensity of VII to VIII Mercalli, which can cause considerable damage to ordinary structures. The area around the City of Newman may have shaking intensity of IX or X. This may be considered a major hazard area.

Although Stanislaus County is not known for its seismic activity, it is imperative that we plan for a potential earthquake disaster. In any earthquake, the primary consideration is saving lives. Time and effort must also be given to providing for people's mental health by reuniting families, providing shelter to the displaced persons and restoring basic needs and services. A major effort will be needed to remove debris and clear roadways, demolish unsafe structures, assist in reestablishing public services and utilities and provide continuing care and temporary housing for affected citizens.

Aside from structural damage, earthquake activity can produce three other types of adverse effects. The first is ground failure. The areas within Modesto that pose the greatest risk of failure and or landslide are the steep slopes adjacent to Dry Creek and the Tuolumne River. Absent a seismic event however, the risk should be viewed as minimal.

The second adverse effect would be from a seiche (an earthquake-induced wave in a lake or reservoir). The City of Modesto has no reservoirs of significant size; therefore the threat should be minimal. The third effect would be caused by damage to a dam that results in dam failure. There are a number of dams, both in and out of the County on the east and west sides, which could produce flooding should they fail.

Location of Known Faults in Stanislaus County Map



Flooding

Flooding has been a major problem throughout the history of City of Modesto, particularly with the encroachment of urban growth into flood planes. Major floods have occurred in 1861, 1938, 1950, 1955, 1969, 1983, 1995, 1997 and 1998.

Substantial action has taken place to reduce flood hazards. Construction of Dan Pedro Dam on the Tuolumne River and New Melones Dam on the Stanislaus River has permitted officials to monitor flows of water in those rivers, significantly reducing the chances of flooding. New Melones Dam has, since its completion, prevented flooding above the 8000 cubic feet per second (cfs) level on the Stanislaus River. Regulation of the flows from Don Pedro limits flooding along the Tuolumne River but does not completely eliminate it.

Several attempts have been made along the San Joaquin River to control flooding. The Corps of Engineers has built levees to limit flooding. These levees are maintained by 9 Reclamation Districts. Since these levees do not extend the full length of the river, flooding still occurs.

The primary flood control concerns for City of Modesto are the controlled or uncontrolled releases from the Don Pedro Dam onto the Tuolumne River and flood conditions on the San Joaquin River, which pose a potential threat to the water treatment facilities on Jennings Road. Additionally, flood conditions can and have developed along the tributary known as Dry Creek, which originates in the watershed of the eastern Stanislaus foothills and terminates where it flows into the Tuolumne River in Modesto. Most flood conditions are from heavy, prolonged rain or rapid snowmelt. Flooding could involve extensive life and property loss, interruption of transportation and communications systems, loss and damage to agricultural land, and interruption of government infrastructure.

For the City of Modesto's emergency organization, there are two flood stages.

Watch Stage – The Stage at which initial action must be taken by concerned interests (livestock warning, removal of equipment from lowest overflow areas, or simply general surveillance of the situation). This level may produce overbank flows sufficient to cause minor flooding of low-lying lands and local roads.

Flood Stage – The Stage at which overbank flows are of sufficient magnitude to cause considerable inundation of land and roads and/or threat of significant hazard to life and property.

Expected Damage

Inundation Areas

For purposes of emergency preparedness, copies of the F.E.M.A. 200 year and 500 year projected floodplains are depicted on the map titled "Flood Hazard".

Facilities Affected

Facilities potentially affected by extensive flooding are:

- Airport
- Schools
- Utilities
- Emergency Services
- Agriculture
- Sanitation
- Residential

Dam Failure

General Situation

A number of dams have a direct effect on City of Modesto. LaGrange Dam, located in the eastern corner of Stanislaus County, is situated on the Tuolumne River just above the town of LaGrange and operated by the Modesto and Turlock Irrigation Districts.

Don Pedro Dam is located in Tuolumne County on the upper Tuolumne River. It has a gross pool capacity of 2,030,000 acre-feet and is operated jointly by the Modesto and Turlock Irrigation Districts.

A third dam, New Melones Dam, located in both Tuolumne and Calaveras Counties, is located on the Stanislaus River and operated by the U.S. Bureau of Reclamation. In the event of failure New Melones could have an indirect effect on Modesto. Gross pool capacity of New Melones is 2,420,000 acre-feet.

Dam failure is the collapse or failure of an impoundment that causes significant downstream flooding. Flooding of the area below the dam may occur as the result of structural failure or overtopping of the dam.

A severe storm, earthquake or erosion of the embankment and foundation leakage may cause the collapse and structural failure of Dams adjacent to the City of Modesto. Seismic activity may also cause inundation by the action of a seismically induced wave that overtops the dam without causing failure of the dam, but significant flooding downstream. Landslides flowing into Lakes and Reservoirs may also cause dams to fail or overtop.

The catastrophic failure of New Melones, Don Pedro or LaGrange Dams will have severe consequences. Foremost, are injuries, loss of life, limited transportation routes and a decrease in vital utilities.

Expected Damage

Inundation Areas

For purposes of emergency preparedness, areas expected to be inundated, should a failure occur, are depicted in maps titled "Dam Inundation Hazard #1" and "Dam Inundation Hazard #2". More specific emergency preparedness information and potential hazards can be found in the individual Emergency Plans for each Dam. These plans are available at the Stanislaus County Office of Emergency Services and will be available in the EOC when activated.

Facilities Affected

Facilities affected by a dam failure are:

- Hospitals
- Schools
- Utilities
- Emergency Services
- Agriculture
- Sanitation
- Residential

Wildfires

General Situation

Generally, from May to October of each year, the City of Modesto experiences its vegetation fire season. Most of the fire susceptible areas are located in or near the Dry Creek and Tuolumne River channels. This is due to the underdeveloped, rugged terrain and the highly flammable, grass and brush covered land. High temperatures, low humidity, and strong winds may exacerbate the potential for wildland fires.

The urban areas of the City of Modesto are not normally susceptible to significant vegetation fires, however, there is still potential for smaller fires in and around the less developed areas where patches of vegetation are present.

Landslides

General Situation

Landslides may be triggered by both natural and manmade changes in the environment. The term landslide is used to describe a wide variety of processes that result in the perceptible downward and outward movement of soil, rock and vegetation under gravitational influence.

The cause of slope instability may be inherent, such as weaknesses in the composition or structure of the rock or soil. Slope stability may be variable as a result of heavy rain and changes in ground water levels. Slope instability may also be transient, as in the case of seismic activity. New environmental conditions such as those imposed by construction activity may also create instability in slopes. Landslides in the City of Modesto, although rare, are most likely to occur on steep slopes adjacent to Dry Creek and the Tuolumne River.

Does the **new or updated** plan describe the methodology used to prepare the estimate?

The spreadsheet in the appendix identified as "Individual Property Schedule" at the end of this document identifies all the property owned by the City of Modesto. This document was prepared by the City's insurance carrier identifying both real and personal property values.

Doubling clicking on the first page will open the entire document as a PDF.

SECTION 4 – MITIGATION STRATEGY

The LHMP must include a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment. This requires the development of goals to accomplish mitigation, taking into account the jurisdiction's existing capabilities. The mitigation actions must also be prioritized according to a cost-benefit review.

Requirement 4.1 Local Hazard Mitigation Goals
Requirement 4.2 Identification and Analysis of Mitigation Actions
Requirement 4.3 Implementation of Mitigation Actions
Requirement 4.4 Multi-Jurisdictional Mitigation Actions

The LHMP represents the City's commitment to reduce risks from natural hazards. It will serve as a guide for the City Council as they commit resources to reducing the effects of natural hazards. Our mission is to integrate existing laws and programs into a mitigation strategy that will serve the citizens by reducing and preventing injury and damage from natural hazards. Our goals were developed to be compatible with the goals of the community as expressed in the General Plan and the Emergency Operations Plan.

The City of Modesto routinely performs activities such as issuing building permits, approving development plans, and repairing roads. The City is conscious that these activities should reflect our vision and goals, whether it is using the most current fire code, building code, restricting development in hazard-prone areas, or making infrastructure decisions based on our latest Risk Assessment findings. This Mitigation Plan will help serve as a tool for making future decisions.

Mitigation efforts should occur both before and after emergencies or disasters. This includes eliminating or reducing the impact of hazards that exist within the City of Modesto.

Mitigation efforts include:

- Amending local ordinances and statutes, such as zoning ordinances, building codes, and other enforcement codes;
- Integrating mitigation efforts into the City General Plan;
- Initiating structural retrofitting measures;
- Improving the understanding of the vulnerability of building types;
- Ensuring that all development in high-risk areas is protected by mitigation measures that provide for safety;
- Assessing tax levees or abatements;
- Emphasizing public education and awareness;
- Assessing and altering land use planning; and/or
- Establishing partnerships between all levels of government and the business community to improve and implement methods to protect property and lives.

CRITERIA USED TO PRIORITIZE MITIGATION ACTIVITIES

- Percent of population at risk;
- Frequency and likelihood of hazard; Repetitive loss areas;
- Community planning resources available;
- Types and percent of land areas at risk;
- Development;
- Project urgency;
- Cost benefit analysis and/or;
- Cost effectiveness of measure.

WHY DO WE NEED A MITIGATION STRATEGY?

- To help the City make decisions that will reduce its vulnerability to hazards;
- It costs too much money to only address the effects of a disaster after it occurs;
- State and Federal aid is usually insufficient to cover the extent of physical and economic damages resulting from disasters;
- Damage from hazards can be decreased and in some cases prevented if the City takes the time to anticipate where and how disasters will occur, and then take appropriate action to minimize damages;
- The City can lessen the impact of disasters and speed the response and recovery process;
- The City has a moral responsibility to its citizens to plan and recognize the potential for hazards; and
- Awareness can help our community become more sustainable and disaster resistant.

FUNDING PRIORITIES

- Protect lives and property at risk from imminent hazards created or made worse by disasters;
- Protect vulnerable critical facilities and infrastructure in high hazard areas of the County;
- Reduce repetitive losses.

Funding projects that will help to mitigate imminent hazards are cost effective and assist in efforts to help communities recover from disasters. It is not anticipated that all future projects will be identified in this LHMP. The LHMP will however, help guide the City to prioritize, be flexible, and identify critical mitigation strategy needs that may arise from a disaster when there is no time to update the local plan.

It is also important for the City to help protect critical facilities and infrastructure. The City of Modesto already has a Capital Improvement Plan with a Capital Projects Program in place. They are actively working to protect facilities and infrastructure important to the City. They are aware of the need to incorporate the requirements of the LHMP into their current and future projects.

Areas of repetitive loss are high priorities for mitigation funding. Repetitive losses can drain City coffers and are cost effective to mitigate.

Mitigation strategies for the five identified risks are as follows:

EARTHQUAKES:

Earthquakes cannot be predicted nor controlled, but they can be anticipated. Earthquake destructive power is being mitigated as much as possible by continuing to require strict adherence to building codes and engineering requirements for all structures and facilities. State building codes have been modified from the national standard to improve the possibility a structure will survive an earthquake. Another mitigation action is to have trained personnel to respond during and after an earthquake for rescue, life safety, and building stabilization. This is addressed as part of the City of Modesto Emergency Operations Plan. The City enforces the following policies identified in Section VI, Subsection B, of the Urban Area General Plan.

- 2a. The City shall continue to use building codes as the primary tool for reducing seismic risk in structures. The California Building Code, which has been adopted by Modesto, Stanislaus County and to the other cities in the County, is intended to ensure that buildings resist major earthquakes of the intensity or severity of the strongest experience in California, without collapse, but with some structural as well as nonstructural damage. In most structures, it is expected that structural damage could be limited to repairable damage, even in a major earthquake.
- 2b. The City shall continue to require all new buildings in the City to be built under the seismic requirements of the 2007 California Building Code, or subsequent editions as adopted by the California Building Standards Commission.
- 2c. The City shall continue to explore measures to induce building owners to upgrade and retrofit structures to render them seismically safe.

HAZARD MITIGATION GOALS—EARTHQUAKES

- Minimize future loss of life and reduce property damage as a result of earthquakes.
- Reduce economic impact of earthquakes.

<u>IDENTIFICATION AND ANALYSIS OF MITIGATION ACTIONS—EARTHQUAKES</u>

PRIORITY ACTIONS		
HAZARD	ACTION	PRIORITY
New Action Earthquake	Provide NIMS training to all city employees who may be called upon in an emergency.	HIGH
Earthquake	Discourage development in geological fault areas.	HIGH
Earthquake	Prohibit urban development in geological fault and hazard areas unless measures to mitigate the problems are included as part of the application.	HIGH
Earthquake	All new development shall be designed to reduce safety and health hazards.	HIGH
Earthquake	The City will continue to enforce all codes and regulation adopted by California Buildings Standards Commission.	HIGH Completed
Earthquake	Support efforts to identify and rehabilitate structures that are not earthquake resistant.	MEDIUM

IMPLEMENTATION OF MITIGATION ACTIONS—EARTHQUAKES

IMPLEMENTATION STRATEGY			
Action/Priority	Responsible Agency	Funding Source Timeframe and Deadline	
New Action All new employees will receive the proper level of NIMS training in accordance with their responsibilities. (HIGH)	- City of Modesto	General FundContinuous Implementation	
Complete/ongoing – The 2007 California Building Code places all of California in Seismic Risk Zone 3, which means that all new structures must be designed to resist collapse in an intensity VIII earthquake. Further, the following policies are adopted throughout the General Plan Area: GSM-2: The City shall require all new	- Community & Econ. Dev Public Works - Planning Commission - City Council	- Existing staff - Application Fees - General Fund - Continuous Implementation	
buildings in the City to be built to the seismic requirements of the 2007 California Building Code (or subsequent editions). (UAGP Policy VI-B.2[b])			
GSM-6: Any construction that occurs as a result of the General Plan must conform with the current UBC regulations, which address seismic safety of new structures and slope requirements. As appropriate, the City will require a geotechnical analysis prior to tentative map approval in order to ascertain site-specific subsurface information necessary to estimate foundation conditions. These geotechnical studies should reference and make use of the most recent regional geologic maps available from the California Department of Conservation Division of Mines and Geology. (UAGP Policy VI-E.1[a]) Applications for development in areas with			
geological faults shall include measures to mitigate the impacts associated with ground shaking. (HIGH)			

IMPLEMENTATION STRATEGY - continued		
Action/Priority	Responsible Agency	Funding Source Timeframe and Deadline
Complete/ongoing – When development is proposed on parcels located within any "Flood Potential Study Area" shown on Figure VI-2, the following policies apply: New urban development shall be approved only when the developer shows it to be protected from "200 year" floods and otherwise complies with the City's Floodplain Management Ordinance (Title 9, Chapter 4 of the Modesto Municipal Code). Residential development may not be approved at the maximum density if it is in a geological fault area or if it does not meet the requirements of Title 9, Chapter 4, Flood Damage Prevention of the City of Modesto Municipal Code. (HIGH)	- Planning Commission - City Council	- Existing staff - Application Fees - General Fund - Continuous Implementation
Complete/ongoing – The city shall continue to enforce this zoning act. The City shall enforce provisions of the Alquist-Priolo Earthquake Fault Zoning Act. (HIGH) Complete - The City of Modesto has adopted an Emergency Operations Plan (EOP) that identifies evacuation routes out of the city. Development in areas of geologic hazard shall include acceptable evacuation routes. (HIGH)	- Public Works - Planning Commission - City Council - Community & Econ. Dev Public Works - Police Department	- Existing staff - Application Fees - General Fund - Continuous Implementation - Existing staff - Application Fees - General Fund - State Funds - Federal Funds - Continuous Implementation

IMPLEMENTATION STRATEGY - continued		
Action/Priority	Responsible Agency	Funding Source Timeframe and Deadline
Complete – The city is currently updating its EOP to comply with state and federal requirements. Follow policies included in the Emergency Operations Plan (EOP). The EOP establishes. The emergency management organization required to mitigate any significant emergency or disaster. The EOP identifies policies, responsibilities and procedures required to protect the health and safety of our community as well as public and private property. The EOP also establishes the operations and procedures for Initial Response Operations (Field Response), to emergencies, the Extended Response Operations (Emergency Operations Center) activities and Recovery Operations. New development shall not conflict with policies included in that document. (HIGH)	Neighborhoods - City Attorney - City Manager - City Council	- Existing staff - Application Fees - General Fund - Continuous Implementation
Complete – A RMS (Tidemark) system has been implemented to track building permits for compliance and routing by all departments. Review all building permits to ensure compliance with the California Fire and Building Codes. (HIGH)	- Fire Prevention Bureau - Community & Econ. Dev.	- Existing staff - Application Fees - General Fund - Continuous Implementation
Complete – The City of Modesto has adopted standards for road construction that will minimize damage in a seismic event. New public roads in areas subject to significant seismic hazard shall be designed to minimize seismic risk. (MEDIUM)	- Public Works - Planning Commission - City Council	- Existing staff - Application Fees - General Fund - Continuous Implementation
Take advantage of programs that would provide funds to identify and rehabilitate structures that do not currently meet building standard minimums for earthquake resistance. (MEDIUM)	- Community & Econ. Dev.	- State Funding - Federal Funding - Continuous Implementation

FLOODS:

Flooding cannot be predicted but it can be anticipated. The greatest threat to flooding in the City of Modesto comes from The Tuolumne River which flows east to west on the southern boarder of the city. The flow rates are controlled by both the Turlock Irrigation District and the Modesto Irrigation District through the dam at the Don Pedro Reservoir. Our greatest threat for flooding comes when there are high flows on the Tuolumne River and heavy rains in the Dry Creek watershed. These two water ways meet at the confluence near the downtown area which backs up on Morton Boulevard where it passes under the La Loma Bridge. This is a minor street and does not cause significant traffic problems when closed. This happens one or more times during the winter months on average. There are a number of houses along Dry Creek susceptible to this flooding.

Mitigation strategy is to encourage the homeowners to raise their homes above flood level or have their houses moved to property not susceptible to flooding. The City enforces the following policies identified in Chapter VI, Subsection C, of the Urban Area General Plan.

- 2a. New urban development shall be approved only when the developer shows it to be protected from "200 year" floods and otherwise complies with the City's Floodplain Management Ordinance (Title 9, Chapter 4, of the Modesto Municipal Code).
- 2b. Undeveloped floodway areas as well as the Tuolumne River Regional Park Master Plan, the Dry Creek Master Plan, the Tuolumne River Comprehensive Planning District (CPD), and the Dry Creek CPD shall be preserved for undeveloped and non-urban use, as provided in the City's Floodplain Management Ordinance.
- 2c. Appropriate emergency plans for the safe evacuation of people from areas subject to inundation from dam failure shall be reviewed and periodically updated. The City Fire Department, Police Department, and Public Works Department shall continue to work with other jurisdictions to develop evacuation routes to be used in case of dam failure. Evacuation routes will serve all of the jurisdictions in the County.
- 2d. Maintain the floodplain management ordinance to ensure that flood insurance can be made available to qualified property owners through state and federal programs.
- 2e. Support the Federal Emergency Management Agency (FEMA) Flood Insurance Program so that residents who qualify may purchase such protection. Property owners whose property is located within certain areas identified by FEMA as flood hazard areas may purchase insurance against flood damage.

- 2f. Discourage development in areas susceptible to floods, except as provided under the Flood Insurance Program and City Floodplain Management Ordinance.
- 3a. All of the Flood Hazard Policies [above] adopted for the Baseline Developed Area apply equally within the Planned Urbanizing Area.
- 3b. The Focused Environmental Impact Report for any Comprehensive Planning District located within any portion of a "Flood Potential Study Area" on Figure VI-2 [of the 2008 Urban Area General Plan] shall include a Flood Hazard Analysis developed to mitigate all of the Flood Hazard impacts identified in the Master Environmental Impact Report.
- 3c. The results of the Flood Hazard Analysis shall be incorporated into the project design of any Specific Plan. The Specific Plan shall prohibit development within the flood channel, consistent with the City's Floodplain Management Ordinance. Where possible, the Specific Plan shall minimize development within the floodplain, consistent with the City's Floodplain Management Ordinance, by such means as providing setbacks from flood zones designating areas within the flood zones for low-intensity development only, or providing for setback levees. When levee improvements are necessary to achieve flood protection, the Specific Plan shall include adequate funding for those improvements. Funding mechanisms may include special assessments or special taxes for both capital and maintenance costs, and shall not rely solely on impact fees. The City may work with other agencies to provide these improvements.
- 3d. The Urban Area General Plan Update includes policies to restrict development in the floodplain. Existing policies of the Urban Area General Plan and the City's Floodplain Management Ordinance will also restrict the amount of post-development runoff to no more than predevelopment conditions.

HAZARD MITIGATION GOALS—FLOOD

- Minimize future loss of life and reduce property damage as a result of floods
- Reduce the economic impact of floods.

<u>IDENTIFICATION AND ANALYSIS OF MITIGATION ACTIONS—FLOOD</u>

PRIORITY ACTIONS		
HAZARD	ACTION	PRIORITY
New Action	Provide NIMS training to all city employees who may be called upon	HIGH
Flood	in an emergency	
Flood	Provide ordinances to ensure that flood insurance can be made available to qualified property owners through State and Federal programs.	HIGH
Flood	Support the Federal Emergency Management Agency (FEMA) Flood Insurance Program so that residents who qualify may purchase such protection. Property owners whose property is located within certain areas identified by FEMA as flood hazard areas may purchase insurance against flood damage. Title 9, Chapter 4 Flood Damage Prevention of the Modesto Municipal Code, meets the FEMA standards.	HIGH
Flood	Development should not be allowed in areas that are within the designated floodway.	HIGH
Flood	New development shall be designed to reduce safety and health hazards.	HIGH
Flood	Discourage development in areas susceptible to floods.	HIGH

IMPLEMENTATION OF MITIGATION ACTIONS—FLOOD

IMPLEMENTATION STRATEGY			
Action/Priority	Responsible Agency	Funding Source Timeframe and Deadline	
New Action – All new employees will receive the proper level of NIMS training in accordance with their responsibilities. (HIGH)	- City of Modesto	- General Fund - Continuous Implementation	
New Action Development within the 200-year flood Boundary shall meet the requirements of Title 9, Chapter 4, "Floodplain Management" of the City of Modesto Municipal Code . (HIGH)	Community & Econ. Dev.Public WorksPlanning CommissionCity Council	 Existing staff Application Fees Continuous Implementation 	
Complete – The City of Modesto and Stanislaus County are currently updating the EOP in compliance with State and Federal guidelines. Follow policies included in the adopted Emergency Operation Plan (EOP). The EOP establishes the emergency management organization required to mitigate any significant emergency or disaster; identifies policies, responsibilities and procedures required to protect the health and safety of our communities as well as public and private property. The EOP also establishes the operations and procedures for Initial Response Operations (Field Response), to emergencies, the Extended Response Operations (Emergency Operations Center) activities and Recovery Operations. New development shall not conflict with policies included in that document. (HIGH)	- Fire Department - Police Department - Public Works - Community & Econ. Dev City Council	 Existing staff Application Fees Continuous Implementation 	

IMPLEMENTATION STRATEGY - continued			
Action/Priority	Responsible Agency	Funding Source Timeframe and Deadline	
Complete - 2008 UAGP Master EIR, page V-10-7 FWQ-6: When development is proposed on parcels located within any "Flood Potential Study Area" shown on Figure VI-2 [of the UAGP], the following policies apply. 1. New urban development shall be approved only when the developer shows it to be protected from "200 year" floods, and otherwise complies with the City's Floodplain Management Ordinance (Title 9, Chapter 4 of the Modesto Municipal Code). (UAGP Policy VI-C.2[a]) 2. Undeveloped floodway areas as well as the Tuolumne River Regional Park Master Plan, the Dry Creek Master Plan, the Tuolumne River CPD, and the Dry Creek CPD shall be preserved for undeveloped and non-urban use, as provided in the City's Floodplain Management Ordinance. (UAGP Policy VI-C.2[b]) The 2008 Urban Area General Plan's	- Community & Econ. Dev Public Works - Planning Commission - City Council	• - Existing staff • - Application Fees • - Continuous Implementation	
Tuolumne River and Dry Creek CPDs allow development at one unit per 10 acres. The City shall utilize the California Environmental Quality Act (CEQA) process to ensure that development does not occur in areas that would be especially susceptible to flooding. As part of this review, potential impacts must be identified and mitigated. (HIGH)			

DAM FAILURE:

Besides Don Pedro Dam, we also have New Melones Dam on the Stanislaus River. Both dams would cause a significant flooding problem for Modesto. The City of Modesto Emergency Response Plan identifies inundation areas and emergency actions to evacuate the areas affected. Timely evacuation is the only way to save lives in case of a dam failure. Property damage would be very difficult to mitigate.

HAZARD MITIGATION GOALS—DAM INUNDATION

- Minimize future loss of life and reduce property damage as a result of dam inundation.
- Reduce the economic impact of flooding due to dam inundation.

IDENTIFICATION/ANALYSIS OF MITIGATION ACTIONS—DAM INUDATION

PRIORITY ACTIONS		
HAZARD	ACTION	PRIORITY
		HIGH
Dam Inundation	in an emergency.	
	All new development shall be designed to reduce safety and health	HIGH
	hazards.	

IMPLEMENTATION OF MITIGATION ACTIONS—DAM INUNDATION

IMPLEMENTATION STRATEGY			
Action/Priority	Responsible Agency	Funding Source Timeframe and Deadline	
New Action All new employees will receive the proper level of NIMS training in compliance with their rolls and responsibilities. Existing staff will receive additional training for compliance with their rolls and responsibilities. (HIGH)	- City of Modesto	- General Fund - Continuous Implementation	
Complete/ongoing - The City of Modesto along with Stanislaus County has adopted an EOP which address emergency evacuation routes relative to the specific hazards. The City Fire Department, Police Department, and Public Works Department will continue to work with other jurisdictions to develop evacuation routes to be used in case of dam failure. Evacuation routes will serve all of the jurisdictions in the County. (HIGH)	 - Fire Department - Police Department - Public Works Dept. - Cal Trans - Stanislaus County 	 Existing staff State Funds Federal Funds Continuous Implementation 	
Complete/Ongoing - The City of Modesto is currently working with Stanislaus County to update the EOP to be in compliance with State and Federal NIMS requirements. Follow policies included in the adopted Emergency Operation Plan (EOP). The EOP establishes the emergency management organization required to mitigate any significant emergency or disaster; identifies policies, responsibilities and procedures required to protect the health and safety of our communities as well as public and private property. The EOP also establishes the operations and procedures for Initial Response Operations (Field Response), to emergencies, the Extended Response Operations (Emergency Operations Center) activities and Recovery Operations. New development shall not conflict with policies included in that document. (HIGH)	- Fire Department - Police Department - Public Works	- Existing staff - State Funds - Federal Funds - Continuous Implementation	

WILDFIRES:

Vegetation fires in the City of Modesto are not of great significance. This is due to the small areas of vegetation plus fire safety practices to keep vegetation away from structures. The Fire Department in Modesto has a standard of responding to emergencies within 6 minutes, which keeps vegetation fires from getting very large. The City enforces the following policies identified in Section V1, Subsection D, of the Urban Area General Plan.

1a. Peak Load Water Supply

The City shall ensure that adequate water fire-flows are maintained throughout the City and shall regularly monitor fire-flows to ensure adequacy. New development shall comply with the minimum fire-flow rates, as presented in Appendix B of the California Fire Code. The Fire Chief is allowed by the California Fire Code to alter any published standards.

1b. Minimum Road Widths and Clearances Around Structures

Minimum road widths and clearances around structures shall conform to Section 503.1.1 of the California Fire Code. The Fire Chief is allowed by the California Fire Code to alter any published standards.

HAZARD MITIGATION GOALS—WILDFIRE

- Minimize the effects of hazardous conditions that might cause loss of life and property.
- Reduce the economic impact of wildfires.

IDENTIFICATION AND ANALYSIS OF MITIGATION ACTIONS—WILDFIRE

	PRIORITY ACTIONS		
HAZARD	ACTION	PRIORITY	
New Action Wildfire	With the adoption of the 2010 California Fire Code all single family residential homes will be equipped with an NFPA 13D fire sprinkler system.	High	
Wildfire	All new development shall be designed to reduce safety and health hazards.	HIGH	
Wildfire	Adequate fire protection shall be provided.	HIGH	
Wildfire	Roads shall be maintained for the safety of travelers for wildfire.	HIGH	
Wildfire	Future growth shall not exceed the capacity to provide services such as water and public safety.	HIGH	
Wildfire	The City will continue to enforce State-mandated structural Health and Safety Codes, including but not limited to the Uniform Building Code, the Uniform Housing Code, the Uniform Fire Code, the Uniform Plumbing Code, the National Electric Code, and Title 24.	HIGH	

IMPLEMENTATION OF MITIGATION ACTIONS—WILDFIRE

IMPLEMENTATION STRATEGY				
Action/Priority	Responsible Agency	Funding Source Timeframe and Deadline		
New Action All single family homes shall be reviewed to ensure compliance with the California Fire Code and California	- Fire Prevention Bureau	- Existing staff		
	- Community & Econ. Dev.	- Application Fees		
Building Code. (HIGH)		- Continuous Implementation		
Complete/ongiong – The Fire Prevention Bureau and the Building Department continue to review all plans for new construction and tenant improvement for conformance with the California Codes.	- Fire Prevention Bureau - Community & Econ. Dev.	Existing staffApplication FeesContinuous Implementation		
All building permits shall be reviewed to ensure compliance with the California Fire Code and California Building Code. (HIGH)				
Complete/ongoing – The Fire Prevention Bureau continues to review all building plans for conformance with the California Fire Code and the California Health and Safety Code	- Fire Department - Community & Econ. DevParks,Rec. & Neighborhood	Existing staffApplication FeesContinuous Implementation		
The California Fire Code and California Health and Safety Code shall be followed in inspections and maintenance of structures regulated under that code. (HIGH)				

IMPLEMENTATION STRATEGY - continued				
Action/Priority	Responsible Agency	Funding Source Timeframe and Deadline		
Complete/ongoing – The Fire Prevention Bureau continues to review all building plans for conformance with the California Fire Code and the California Health and Safety Code All projects in the City shall be referred to the Fire Department for comment. The comments will be used to condition or recommend modifications of the project as it relates to fire safety and rescue issues. (HIGH)	- City Council	 Existing staff Application Fees Continuous Implementation 		
Complete/ongoing – Fire suppression services continue to be provided in accordance with NFPA guidelines. The City will continue to ensure adequate fire suppression measures are provided. (HIGH)	- Fire Department - City Council	Existing staffState FundsFederal FundContinuous Implementation		
Complete/ongoing – All new development shall meet the water flow requirements of the current adopted edition of the California Fire Code. New development shall have adequate water to meet the established fire flow standards. (HIGH)	- Community & Econ. Dev Fire Department - Public Works - City Council	- Applicant/Private Funds - Continuous Implementation		
Funding sources to maintain adequate, on going fire services for both existing and new development shall be encouraged. (MEDIUM)	- Fire Department - Finance Department - City Manager - City Council	- City Funds - Continuous Implementation		

LANDSLIDES:

With Modesto being mostly flat with the exception of along the river and Dry Creek, landslides are of a minor concern. Current standards for buildings and infrastructure address the requirements to ensure slope stability. The City enforces the following policies identified in Section V1, Subsection E, of the Urban Area General Plan.

- 1a. Any construction that occurs as a result of the General Plan must conform with the current California Building Code (CBC) regulations, which address seismic safety of new structures and slope requirements. As appropriate, the City will require a geotechnical analysis prior to tentative map review in order to ascertain site-specific subsurface information necessary to estimate foundation conditions. These geotechnical studies should reference and make use of the most recent regional geologic maps available from the California Department of Conservation Division of Mines and Geology.
- Erosion in the Modesto Urban Area is a nominal concern and is limited to areas adjacent to Dry Creek and the Stanislaus and Tuolumne Rivers. We are primarily concerned with bank protection in these areas. The responsibility for erosion control belongs to the landowner or developer who modifies the land surface and is monitored and controlled by the community through the grading requirement of the California Building Code and controls on the subdivision of land. The erosion control program shall be consistent with the following policies identified in Section VI, Subsection E, of the Urban Area General Plan.
- 2a. Fluvial erosion related to construction shall be controlled by a construction erosion control program which shall be filed with the City Engineering & Transportation Department and kept current throughout any site development phase.
- 2b. The erosion control program shall include "best management practices" as appropriate, given the specific circumstances of the site and/or project. Table 9-2 in the Master Environmental Impact Report presents examples of best management practices.
- 2c. Sediment control basins to capture eroded sediments and contain them on the project sites shall consider appropriate design criteria as outlines in Table 9-3 in the Master Environmental Impact Report.

HAZARD MITIGATION GOALS—LANDSLIDES

- Minimize future loss of life and reduce property damage as a result of landslides.
- Reduce economic impact of landslides.

<u>IDENTIFICATION AND ANALYSIS OF MITIGATION ACTIONS—LANDSLIDES</u>

PRIORITY ACTIONS			
HAZARD	ACTION	PRIO	
New Action Landslide	All new development shall comply with 2010 California Building Code and shall meet the requirements of the 2008 UAGP Master EIR.		
Landslide	All new development shall be designed to reduce safety and health hazards.	HIGH	
Landslide	Discourage development on lands that are subject to landslides.	HIGH	
Landslide	New development near river bluffs shall be designed to reduce safety and health hazards.	HIGH	

<u>IMPLEMENTATION OF MITIGATION ACTIONS—LANDSLIDES</u>

IMPLEMEN	TATION STRATEGY	
Action/Priority	Responsible Agency	Funding Source Timeframe and Deadline
Development proposals in an area identified as having unstable soils and subject to landslides such as areas along river bluffs shall include measures for mitigating possible hazards.	Community & Econ. Dev.Planning CommissionCity Council	 Existing staff Application Fees General Fund State Funds Federal Funds Continuous Implementation
Complete – 2008 UAGP Master EIR page V-17-11 of the 2008 UAGP Master EIR states, 1. Thresholds of Significance Suggested by the California Environmental Quality Act CEQA requires that agencies analyze effects on the environment of seismic and landslide hazards; a model checklist to guide analysis is provided in Appendix G of the State CEQA Guidelines. Consistent with this model checklist, impacts were identified as significant if a project would: a. expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: 4. landslides (including seismically induced landslides); The City shall utilize the California Environmental Quality Act (CEQA) process to ensure that development does not occur that would be especially susceptible to landslides. Most discretionary projects require review for compliance with CEQA. As part of this review, potential impacts must be identified and mitigated or a statement of overriding concerns adopted. (HIGH)	- Community & Econ. Dev Planning Commission - City Council	 Existing staff Application Fees General Fund State Funds Federal Funds Continuous Implementation

IMPLEMENTATI	ON STRATEGY - continue	ed
Action/Priority	Responsible Agency	Funding Source Timeframe and Deadline
The routes of new public roads in areas subject to landslides shall be designed to minimize landslide risks. (HIGH)	- Public Works- Planning Commission- City Council	 Existing staff Application Fees General Fund State Funds Federal Funds Continuous Implementation
Development proposals in an area identified as having unstable soils and subject to landslides such as areas along river bluffs shall include measures for mitigating possible hazards. (HIGH)	Community & Econ. Dev.Public WorksPlanning CommissionCity Council	 Existing staff Application Fees General Fund State Funds Federal Funds Continuous Implementation
All building permits shall be reviewed to ensure compliance with the Uniform Building Code and Subdivision Ordinance in areas of unstable soils. (HIGH)	- Community & Econ. Dev.	Existing staffApplication FeesContinuous Implementation
Follow policies included in the adopted Emergency Operations Plan (EOP). The EOP establishes the emergency management organization required to mitigate any significant emergency or disaster. The EOP identifies policies, responsibilities and procedures required to protect the health and safety of our communities as well as public and private property. The EOP also establishes the operations and procedures for Initial Response Operations (Field Response), to emergencies, the Extended Response Operations (Emergency Operations Center) activities and Recovery Operations. New development shall not conflict with policies included in that document. (HIGH)	 - Fire Department - Public Works - Police Department - Community & Econ. Dev. - City Council 	 Existing staff Application Fees Continuous Implementation

SECTION 5 – PLAN MAINTENANCE PROCEDURES

This section requires a formal plan maintenance process to ensure the plan remains an active relevant document. It also includes an explanation of how the mitigation strategies will be incorporated into existing planning mechanisms.

Requirement 5.1 Monitoring, Evaluation, and Updating the Plan Requirement 5.2 incorporation into Existing Planning Mechanisms Requirement 5.3 Continued Public Involvement

The LHMP will be monitored, evaluated, and up dated every 5 years or more frequently as the need arises. It is available for incorporation into existing planning mechanisms. The plan is a public document and available to the public for comment.

The City's LHMP is a living document that will require adjustments to maintain its relevance. The Fire Department Representative and Community and Economic Development Department Representative will meet at least annually to monitor, evaluate and update the plan to reflect ongoing efforts to improve hazard mitigation activities.

The Geographical Information System used for the Stanislaus County Multi-Jurisdiction Hazard Mitigation Plan will provide continuous updating of live information such as the Assessor valuation and land use data as properties are re-assessed and permits are pulled. The City of Modesto has access to this information this allowing the LHMP to be a current planning tool for both the development process and emergency management operations. The City property and facilities inventory used in the Risk Assessment will be reviewed annually. Any revisions deemed necessary will be added to the LHMP and a copy of the written report will be provided to the Stanislaus County Chief Executive Office, the State Office of Emergency Services (OES), and the Federal Emergency Management Agency (FEMA).

The City's LHMP will be updated every five years as required by the Disaster Mitigation Act of 2000. The State of California is required to update their plan every three years. The City will continue to work with the County when the plan is updated and we will seek input from the public regarding revisions to the current plan. Any updates to the LHMP will be shared with Stanislaus County.

The process to update the plan will be as outlined in the table below:

ACTION	WHEN	RESPONSIBILITY
1. Review and Update Hazard Risks	Spring 2010	Fire Dept. & Community & Econ.
2. Risk Assessment Inventory	Spring 2010	Fire Dept. & Community & Econ.
3. Review Goals	Spring 2010	Fire Dept. & Community & Econ.
4. Review/Update Mitigation Strategies	Spring 2010	Fire Dept. & Community & Econ.
5. Publish Updated Local Hazard Mitigation	Winter 2010	Fire Dept. & Community & Econ.
6. Public Review/Comment/Input at Each		

SECTION 6 – ADDITIONAL STATE & FEDERAL REQUIREMENTS

The additional requirements under this section are to ensure Environmental Protection and Historic Preservation is essential components of the LHMP.

Requirement 6.1 Environmental Protection & Historic Preservation Laws (State & Federal)

It is the intent of this plan to ensure environmental protection and historic preservation. Section 65560 of the Government Code requires a "local open space plan". In the Modesto Urban Area the Stanislaus River, Tuolumne River and Dry Creek are recognized as natural resources and all three are proposed to be acquired and maintained as Regional Parks. Additionally open space for public health, safety, and outdoor recreation is also identified in the Urban Area General Plan. Additional details are referenced in Chapter VII of the Urban Area General Plan.

Four buildings and a historic bridge are listed on the National Register of Historic Places. In addition, 120 properties are listed on the Directory of Determination of Eligibility (1990) for the National Register if Historic Places. Properties are also listed on the California Points of Historical interest (1992) and the California Inventory of Historic Resources (1978). The City of Modesto's Landmark Preservation list in 1995 includes 19 properties, with 422 properties surveyed for potential inclusion into the Preservation list.

The preservation of these historical sites is addressed in the Urban Area General Plan, Chapter VII, Archaeological and Cultural Resources, Section F, Subsections c and e.

- (c) Restoration and renovation of buildings should be performed in accordance with the "Secretary of the Interior's Standards for the Treatment of Historic Properties" and the State Historic Building Code. The standards serve as guidelines for rehabilitation, restoration, preservation, retaining, and preserving historic character of a property.
- (e) The modification of historic structures and places can be mitigated through the application of existing regulation and consultation with the State historic Preservation Officer, an interim procedure whereby the City evaluates proposals to modify historic structure and develops a program to reduce the impacts on an individual basis.

APPENDICIES

Plan Review Crosswalk

INSTRUCTIONS FOR USING THE PLAN REVIEW CROSSWALK FOR REVIEW OF LOCAL MITIGATION PLANS

Attached is a Plan Review Crosswalk based on the **Local Multi-Hazard Mitigation Planning Guidance**, published by FEMA in July, 2008. This Plan Review Crosswalk is consistent with the *Robert T. Stafford Disaster Relief and Emergency Assistance Act* (Stafford Act), as amended by Section 322 of the *Disaster Mitigation Act of 2000* (P.L. 106-390), the *National Flood Insurance Act of 1968*, as amended by the *National Flood Insurance Reform Act of 2004* (P.L. 108-264) and 44 Code of Federal Regulations (CFR) Part 201 – Mitigation Planning, inclusive of all amendments through October 31, 2007.

SCORING SYSTEM

- **N Needs Improvement:** The plan does not meet the minimum for the requirement. Reviewer's comments must be provided.
- **S Satisfactory:** The plan meets the minimum for the requirement. Reviewer's comments are encouraged, but not required.

Each requirement includes separate elements. All elements of a requirement must be rated "Satisfactory" in order for the requirement to be fulfilled and receive a summary score of "Satisfactory." A "Needs Improvement" score on elements shaded in gray (recommended but not required) will not preclude the plan from passing.

When reviewing single jurisdiction plans, reviewers may want to put an N/A in the boxes for multi-jurisdictional plan requirements. When reviewing multi-jurisdictional plans, however, all elements apply. States that have additional requirements can add them in the appropriate sections of the *Local Multi-Hazard Mitigation Planning Guidance* or create a new section and modify this Plan Review Crosswalk to record the score for those requirements. Optional matrices for assisting in the review of sections on profiling hazards, assessing vulnerability, and identifying and analyzing mitigation actions are found at the end of the Plan Review Crosswalk.

The example below illustrates how to fill in the Plan Review Crosswalk.:

Example					
Assessing Vulnerability: Overview					
Requirement §201.6(c)(2)(ii): [The risk assessection. This description shall include an overall		a] description of the jurisdiction's vulnerability to the had azard and its impact on the community.	azards described in paragr	raph (c)(2,)(i) of
	Location in the Plan (section or		se	CORE	
Element	annex and page #)	Reviewer's Comments	N		s
A. Does the new or updated plan include an overall summary description of the jurisdiction's vulnerability to each hazard?	Section III, pp 7-12				
B. Does the new or updated plan address the impact of each hazard on the jurisdiction?					
SUMMARY SCORE					

	MITICATION	PLAN REVIEW	CDOCCWALK
I CJC.AI	WILLIGATION	PIANKEVIEW	CKUSSWAI N

LOCAL MITIGATION PLAN REVIEW SUMMARY

The plan cannot be approved if the plan has not been formally adopted. Each requirement includes separate elements. All elements of the requirement must be rated "Satisfactory" in order for the requirement to be fulfilled and receive a score of "Satisfactory." Elements of each requirement are listed on the following pages of the Plan Review Crosswalk. A "Needs Improvement" score on elements shaded in gray (recommended but not required) will not preclude the plan from passing. Reviewer's comments must be provided for requirements receiving a "Needs Improvement" score.

Prerequisite(s) (Check Applicable Box)	NOT MET	MET
1. Adoption by the Local Governing Body: §201.6(c)(5) OR		
2. Multi-Jurisdictional Plan Adoption: §201.6(c)(5) AND		
3. Multi-Jurisdictional Planning Participation: §201.6(a)(3)		
Planning Process	N	S
4. Documentation of the Planning Process: §201.6(b) and §201.6(c)(1)		
Risk Assessment	N	S
5. Identifying Hazards: §201.6(c)(2)(i)		
6. Profiling Hazards: §201.6(c)(2)(i)		
7. Assessing Vulnerability: Overview: §201.6(c)(2)(ii)		
8. Assessing Vulnerability: Addressing Repetitive Loss Properties. §201.6(c)(2)(ii)		
9. Assessing Vulnerability: Identifying Structures, Infrastructure, and Critical Facilities: §201.6(c)(2)(ii)(B)		
10. Assessing Vulnerability: Estimating Potential Losses: §201.6(c)(2)(ii)(B)		
11. Assessing Vulnerability: Analyzing Development Trends: §201.6(c)(2)(ii)(C)		
12. Multi-Jurisdictional Risk Assessment: §201.6(c)(2)(iii)		

SCORING SYSTEM

Please check one of the following for each requirement.

- **N Needs Improvement:** The plan does not meet the minimum for the requirement. Reviewer's comments must be provided.
- **S Satisfactory:** The plan meets the minimum for the requirement. Reviewer's comments are encouraged, but not required.

Mitigation Strategy	N	S
13. Local Hazard Mitigation Goals: §201.6(c)(3)(i)		
14. Identification and Analysis of Mitigation Actions: §201.6(c)(3)(ii)		
15. Identification and Analysis of Mitigation Actions: NFIP Compliance. §201.6(c)(3)(ii)		
16. Implementation of Mitigation Actions: §201.6(c)(3)(iii)		
17. Multi-Jurisdictional Mitigation Actions: §201.6(c)(3)(iv)		
Plan Maintenance Process	N	s
18. Monitoring, Evaluating, and Updating the Plan: §201.6(c)(4)(ii)		
19. Incorporation into Existing Planning Mechanisms: §201.6(c)(4)(ii)		
20. Continued Public Involvement: §201.6(c)(4)(iii)		
State		
Multi-jurisdictional: Letter of Commitment for each jurisdiction		
Summary of mitigation projects		
Summary of hazards		
LOCAL MITIGATION PLAN APPROVAL STA	TUS	
PLAN NOT APPROVED		
See Reviewer's Comments		
PLAN APPROVED		

^{*}States that have additional requirements can add them in the appropriate sections of the *Local Multi-Hazard Mitigation Planning Guidance* or create a new section and modify this Plan Review Crosswalk to record the score for those requirements.

Local Mitigation Plan Review and Approval Status	Local	Mitigation	Plan	Review	and .	Αp	proval	Status
--	-------	------------	------	--------	-------	----	--------	--------

Jurisdiction: City of Modesto	Plan	of Plan: I	Local Hazard N	•			ne 21, 2	010		
Local Point of Contact: Michael Pay	rton		Address:	1010 Ter Modesto						
Title: Division Chief / Fire Marshal										
Agency: Modesto Fire Department										
Phone Number: 209.571.5876			E-Mail: m	E-Mail: mpayton@modestofire.com						
State Reviewer:	Title:				Date	:				
FEMA Reviewer:	Title:				Date	:				\neg
Date Received in FEMA Region [Inser	rt #]				<u> </u>					
Plan Not Approved										
Plan Approved										
Date Approved										
	FIRM in plan?	Adopted	Participating	Risk Assessm	ent	Mitigation Action	NFIP	Status	,	
Jurisdiction:	Y/N	Y/N	Y/N	Y/N		Y/N	Y/N	N/A	CRS Review Y/N	CRS Class
1.										
2.										
3. [ATTACH PAGE(S) WITH ADDITIONAL JURISDICTIONS]										

* Notes: N = Not Participating N/A = Not Mapped Y = Participating

PREREQUISITE(S)

1. Adoption by the Local Governing Body

Requirement §201.6(c)(5): [The local hazard mitigation plan **shall** include] documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE NOT MET	MET
A. Has the local governing body adopted new or updated plan?	Pending FEMA Approval			
B. Is supporting documentation, such as a resolution, included?	Pending FEMA Approval			
SUMMARY SCORE				

2. Multi-Jurisdictional Plan Adoption

Requirement §201.6(c)(5): For multi-jurisdictional plans, each jurisdiction requesting approval of the plan **must** document that it has been formally adopted.

	Lasatian in the		SCORE	
Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	NOT MET	MET
A. Does the new or updated plan indicate the specific jurisdictions represented in the plan?	Page 1			
B. For each jurisdiction, has the local governing body adopted the new or updated plan?	Pending FEMA Approval			
C.Is supporting documentation, such as a resolution, included for each participating jurisdiction?	Pending FEMA Approval			
SUMMARY SCORE				

3. Multi-Jurisdictional Planning Participation

Requirement §201.6(a)(3): Multi-jurisdictional plans (e.g., watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process ... Statewide plans will not be accepted as multi-jurisdictional plans.

				SCORI	E
	Location in the Plan (section or			NOT	
Element	annex and page #)	Reviewer's Comments		MET	MET
A. Does the new or updated plan describe how each					
jurisdiction participated in the plan's development?	Page 3				
B. Does the updated plan identify all participating					
jurisdictions, including new, continuing, and the					
jurisdictions that no longer participate in the plan?	Page 3				
			SUMMARY SCORE		

PLANNING PROCESS: §201.6(b): An open public involvement process is essential to the development of an effective plan.

4. Documentation of the Planning Process

Requirement §201.6(b): In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process **shall** include:

- (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
- (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
- (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

Requirement §201.6(c)(1): [The plan **shall** document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

	Location in the		SCOF	₹E
Element	Plan (section or annex and page #)	Reviewer's Comments	N	S
A. Does the new or updated plan indicate who was involved in the current planning process? (For example, who led the development at the staff level and were there any external contributors such as contractors? Who participated on the plan committee, provided information, reviewed drafts, etc.?)	Section I, pp 3-5			
B. Does the new or updated plan indicate how the public was involved? (Was the public provided an opportunity to comment on the plan during the drafting	Section II, pp 6			

	stage and prior to the plan approval?)		
C.	Does the new or updated plan discuss the opportunity for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning process?	Section I, pp 3-5	
D.	Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?	Pages 1, 16, 21	
E.	Does the plan provide a narrative description of the process followed to prepare the new or updated plan?	Section II pp 5	
F.	Does the updated plan document how the planning team reviewed and analyzed each section of the plan and whether each section was revised as part of the update process?	Section I pp 3-5	
		SUMMARY SCORE	

RISK ASSESSMENT: $\S 201.6(c)(2)$: The plan shall include a risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.

5. Identifying Hazards

Requirement §201.6(c)(2)(i): [The risk assessment **shall** include a] description of the type ... of all natural hazards that can affect the jurisdiction.

	Location in the			SCOF	₹E
Element	Plan (section or annex and page #)	Reviewer's Comments		N	s
A. Does the new or updated plan include a description of the types of all natural hazards that affect the jurisdiction?	Section III pp 7- 12				
			SUMMARY SCORE		

6. Profiling Hazards

Requirement §201.6(c)(2)(i): [The risk assessment **shall** include a] description of the ... location and extent of all natural hazards that can affect the jurisdiction. The plan **shall** include information on previous occurrences of hazard events and on the probability of future hazard events.

	Location in the		SCO	RE
Element	Plan (section or annex and page #)	Reviewer's Comments	N	S
A. Does the risk assessment identify the location (<i>i.e.</i> , geographic area affected) of each natural hazard addressed in the new or updated plan?	Section IV pp 16-			
B. Does the risk assessment identify the extent (<i>i.e.</i> , magnitude or severity) of each hazard addressed in the new or updated plan?				
C. Does the plan provide information on previous occurrences of each hazard addressed in the new or updated plan?	1 ' '			
D. Does the plan include the probability of future events (<i>i.e.</i> , chance of occurrence) for each hazard addressed in the new or updated plan?	Section III pp 7- 12			
		SUMMARY SCORE		

7. Assessing Vulnerability: Overview

Requirement §201.6(c)(2)(ii): [The risk assessment **shall** include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description **shall** include an overall summary of each hazard and its impact on the community.

	Location in the		SCO	RE
Element	Plan (section or annex and page #)	Reviewer's Comments	N	S
A. Does the new or updated plan include an overall summary description of the jurisdiction's vulnerability to each hazard?	Section III pp 7- 12			
B. Does the new or updated plan address the impact of each hazard on the jurisdiction?	Section III pp 7- 12			
		SUMMARY SCORE		

8. Assessing Vulnerability: Addressing Repetitive Loss Properties

Requirement §201.6(c)(2)(ii): [The risk assessment] **must** also address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged floods.

, , ,	Location in the			SCOF	RE
Element	Plan (section or annex and page #)	Reviewer's Comments		N	S
A. Does the new or updated plan describe vulnerability	Section III pp 7-				
in terms of the types and numbers of repetitive loss	12				
properties located in the identified hazard areas?					
			SUMMARY SCORE		

9. Assessing Vulnerability: Identifying Structures

Requirement §201.6(c)(2)(ii)(A): The plan **should** describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard area

	Location in the		SCOF	RE
Element	Plan (section or annex and page #)	Reviewer's Comments	N	S
A. Does the new or updated plan describe vulnerability in terms of the types and numbers of existing buildings, infrastructure, and critical facilities located in the identified hazard areas?				
B. Does the new or updated plan describe vulnerability in terms of the types and numbers of future buildings, infrastructure, and critical facilities located in the identified hazard areas?				
		SUMMARY SCORE		

10. Assessing Vulnerability: Estimating Potential Losses

Requirement §201.6(c)(2)(ii)(B): [The plan **should** describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) of this section and a description of the methodology used to prepare the estimate

	Location in the			SCOF	RE
Element	Plan (section or annex and page #)	Reviewer's Comments		N	S
A. Does the new or updated plan estimate potential dollar losses to vulnerable structures?	Appendix, page 64				
B. Does the new or updated plan describe the methodology used to prepare the estimate?	Section III pp 12				
			SUMMARY SCORE		

11. Assessing Vulnerability: Analyzing Development Trends

Requirement §201.6(c)(2)(ii)(C): [The plan **should** describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

	Location in the			SCOF	₹E
Element	Plan (section or annex and page #)	Reviewer's Comments		N	S
A. Does the new or updated plan describe land uses and development trends?	Section III pp 7- 12				
			SUMMARY SCORE		

12. Multi-Jurisdictional Risk Assessment

Requirement §201.6(c)(2)(iii): For multi-jurisdictional plans, the risk assessment **must** assess each jurisdiction's risks where they vary from the risks facing the entire planning area.

	Location in the			SCOF	₹E
Element	Plan (section or annex and page #)	Reviewer's Comments		N	S
A. Does the new or updated plan include a risk assessment for each participating jurisdiction as needed to reflect unique or varied risks?	Section III pp 7- 12				
			SUMMARY SCORE		

MITIGATION STRATEGY: \$201.6(c)(3): The plan shall include a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.

13. Local Hazard Mitigation Goals

Requirement §201.6(c)(3)(i): [The hazard mitigation strategy **shall** include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

	Location in the		SCO	RE
Element	Plan (section or annex and page #)	Reviewer's Comments	N	S
A Does the new or updated plan include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards?	33			
		SUMMARY SCORE		

14. Identification and Analysis of Mitigation Actions

Requirement §201.6(c)(3)(ii): [The mitigation strategy **shall** include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

	Location in the		SCOF	RE
Element	Plan (section or annex and page #)	Reviewer's Comments	N	S
A. Does the new or updated plan identify and analyze a comprehensive range of specific mitigation actions and projects for each hazard?				
B Do the identified actions and projects address reducing the effects of hazards on new buildings and infrastructure?	Section IV pp 17-33			
C. Do the identified actions and projects address reducing the effects of hazards on existing buildings and infrastructure?	Section IV pp 13-33			
		SUMMARY SCORE		

15. Identification and Analysis of Mitigation Actions: National Flood Insurance Program (NFIP) Compliance

Requirement: §201.6(c)(3)(ii): [The mitigation strategy] must also address the jurisdiction's participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.

	Location in the		SCO	<u>RE</u>
Element	Plan (section or annex and page #)	Reviewer's Comments	N	S
A. Does the new or updated plan describe	Section IV pp21-22			
the jurisdiction (s) participation in the NFIP?				
B. Does the mitigation strategy identify, analyze and prioritize actions related to continued compliance with the NFIP?	Section IV pp21-25			
		SUMMARY SCORE		

16. Implementation of Mitigation Actions

Requirement: §201.6(c)(3)(iii): [The mitigation strategy section shall include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

SCORE

			SCOP	<u> </u>
Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	N	S
A. Does the new or updated mitigation strategy include how the actions are prioritized ? (For example, is there a discussion of the process and criteria used?)	Section IV pp 13-33			
B. Does the new or updated mitigation strategy address how the actions will be implemented and administered, including the responsible department, existing and potential resources and the timeframe to complete each action?	Section IV pp 18-35			
C.Does the new or updated prioritization process include an emphasis on the use of a cost-benefit review to maximize benefits?	Section IV pp 18-35			
D. Does the updated plan identify the completed, deleted or deferred mitigation actions as a benchmark for progress, and if	Section IV pp 18-35			

LOCAL MITIGATION PLAN REVIEW CROSSI	NALK		
activities are unchanged (i.e., deferred), does the updated plan describe why no changes occurred?			
		SUMMARY SCORE	

17. Multi-Jurisdictional Mitigation Actions

Requirement §201.6(c)(3)(iv): For multi-jurisdictional plans, there **must** be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

	Location in the		SCOF	RE
Element	Plan (section or annex and page #)	Reviewer's Comments	N	S
A Does the new or updated plan include identifiable action items for each jurisdiction requesting FEMA approval of the plan?	Section IV pp 18-35			
B. Does the updated plan identify the completed, deleted or deferred mitigation actions as a benchmark for progress, and if activities are unchanged (<i>i.e.</i> , deferred), does the updated plan describe why no changes occurred?	Section IV pp 17-35			
		SUMMARY SCORE		

PLAN MAINTENANCE PROCESS

18. Monitoring, Evaluating, and Updating the Plan

Requirement §201.6(c)(4)(i): [The plan maintenance process **shall** include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

			SCO	ŖE
Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	N	S
A. Does the new or updated plan describe the method and schedule for monitoring the plan, including the responsible department?	Section IV pp 18-35			
B. Does the new or updated plan describe the method and schedule for evaluating the plan, including how, when and by whom (<i>i.e.</i> the responsible department)?	Section IV pp 18-35			
C. Does the new or updated plan describe the method and schedule for updating the plan within the five-year cycle?	Section IV pp 13-15			
		SUMMARY SCORE		

19. Incorporation into Existing Planning Mechanisms

Requirement §201.6(c)(4)(ii): [The plan **shall** include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.

	1		SCO	<u>RE</u>
Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	N	S
A. Does the new or updated plan identify other local planning mechanisms available for incorporating the mitigation requirements of the mitigation plan?	Page 13			
B. Does the new or updated plan include a process by which the local government will incorporate the mitigation strategy and other information contained in the plan (e.g., risk assessment) into other planning mechanisms, when appropriate?	Page 13			
C. Does the updated plan explain how the local government incorporated the mitigation strategy and other information contained in the plan (<i>e.g.</i> , risk assessment) into other planning mechanisms, when appropriate?	Page 13			
		SUMMARY SCORE		

Continued Public Involvement

Requirement §201.6(c)(4)(iii): [The plan maintenance process **shall** include a] discussion on how the community will continue public participation in the plan maintenance process.

	Location in the		SCOF	₹E
Element	Plan (section or annex and page #)	Reviewer's Comments	N	S
A. Does the new or updated plan explain how continued public participation will be obtained? (For example, will there be public notices, an ongoing mitigation plan committee, or annual review meetings with stakeholders?)	Section II pp 5-6			
		SUMMARY SCORE		

MATRIX A: PROFILING HAZARDS

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure that their plan addresses each natural hazard that can affect the jurisdiction. **Completing the matrix is not required**.

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each applicable hazard. An "N" for any element of any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk.

Hazard Type	A. Location	n	B. Exter	nt	C. Previo		D. Probability of Future Events		
	§201.6(c)(2)(i) Yes	N	S	N	S	N	S	N	S
Avalanche									
Coastal Erosion									
Coastal Storm									
Dam Failure			\Box						
Drought									
Earthquake						ΙΠ		ΙΠ	
Expansive Soils									
Levee Failure			\sqcap		П	IΠ	\Box	ΙΠ	П
Flood									
Hailstorm			\sqcap			ΙΠ		ΙΠ	\Box
Hurricane									
Land Subsidence						ΙΠ	Ī	IFI	П
Landslide						IП			
Severe Winter Storm									
Tornado									
Tsunami						IF	Ī	IF	П
Volcano									
Wildfire			\sqcap		П	ΙΠ	ī	IFI	П
Windstorm			\Box		П	ΙΠ	П	ΙΠ	
Other							П		
Other							П		
Other									



Legend:

§201.6(c)(2)(i) Profiling Hazards

- A. Does the risk assessment identify the location (i.e., geographic area affected) of each hazard addressed in the **new or updated** plan?
- B. Does the risk assessment identify the extent (i.e., magnitude or severity) of each hazard addressed in the **new or updated** plan?
- C. Does the plan provide information on previous occurrences of each natural hazard addressed in the **new or updated** plan?
- D. Does the plan include the probability of future events (i.e., chance of occurrence) for each hazard addressed in the plan?

MATRIX B: ASSESSING VULNERABILITY

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure that the new or updated plan addresses each requirement. Completing the matrix is not required.

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each applicable hazard. An "N" for any element of any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk. Note: Receiving an N in the shaded columns will not preclude the plan from passing.

comments section of t	he Plan Review	Cro	sswal	k. Note:	Receiv	ing an N	I in t	the	shaded columns wi	l not pre	clude the pla	ın fro	om passi	ng.			Tool
Hazard Type	Hazards Identified Per Requirement §201.6(c)(2)(i)			Overall nary iption of rability	В.	Hazard		A. of in (E	Existing Structures	Number	es in Hazard		A. Loss	Estimate	B. Met	hodology	To check boxes, double click on the box and to "checked."
	Yes		N	S	N	S		N	S	N	S	Losses	N	_	N	S	
Avalanche												ÖS					
Coastal Erosion							res										
Coastal Storm							亰					뱵					
Dam Failure	\boxtimes						Structur					Potential					
Drought																	
Earthquake	\boxtimes	>					Identifying					Estimating					
Expansive Soils		- Š					ığ.					шa					
Levee Failure		Overview					der					sti					
Flood	\boxtimes	ī.															
Hailstorm		<u>∰</u>					<u> </u>					<u></u>					
Hurricane		api					api					i g					
Land Subsidence		Vulnerability					ulnerability:					Vulnerability					
Landslide	\boxtimes	5					l n					<u> </u>					
Severe Winter Storm							g										
Tornado		SSil					ssing					ssing					
Tsunami		Assessing					မွ					Se					
Volcano		_					As					¥					
Wildfire								IE				€				10	
Windstorm		.6(c)(2)(ii)				Ō	.6(c)(2)(ii)			الَّال		(2	الله				
Other		9)					9)9:	IĒ				9)	ΙŌ			ΙŌ	
Other		§201.					\$201.					§201.6(c)(2)(ii)					
Other		8					8	ľĒ				Š					

Legend:

§201.6(c)(2)(ii) Assessing Vulnerability: Overview

- A. Does the **new or updated** plan include an overall summary description of the jurisdiction's vulnerability to each hazard?
- B. Does the **new or updated** plan address the impact of each hazard on the jurisdiction?

§201.6(c)(2)(ii)(A) Assessing Vulnerability: Identifying Structures

A. Does the **new or updated** plan describe vulnerability in terms of the types and numbers of existing buildings, infrastructure, and critical facilities located in the identified hazard areas?

B. Does the **new or updated** plan describe vulnerability in terms of the types and numbers of future buildings, infrastructure, and critical facilities located in the identified hazard areas?

§201.6(c)(2)(ii)(B) Assessing Vulnerability: Estimating Potential Losses

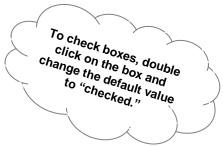
- A. Does the **new or updated** plan estimate potential dollar losses to vulnerable structures?
- B. Does the new or updated plan describe the methodology used to prepare the estimate?

MATRIX C: IDENTIFICATION AND ANALYSIS OF MITIGATION ACTIONS

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure consideration of a range of actions for each hazard. **Completing the matrix is not required.**

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each **applicable** hazard. An "N" for any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk.

Hazard Type	Hazards Identified Per Requirement	A. Comprehensive Range of Actions					
падаги туре	§201.6(c)(2)(i)	and Projects					
A I I -	Yes	N S					
Avalanche							
Coastal Erosion							
Coastal Storm							
Dam Failure	$\overline{\boxtimes}$						
Drought							
Earthquake	\boxtimes						
Expansive Soils							
Levee Failure							
Flood							
Hailstorm							
Hurricane	П						
Land Subsidence							
Landslide	$\overline{\boxtimes}$						
Severe Winter Storm							
Tornado							
Tsunami							
Volcano	П						
Wildfire							
Windstorm							
Other							
Other							
Other							

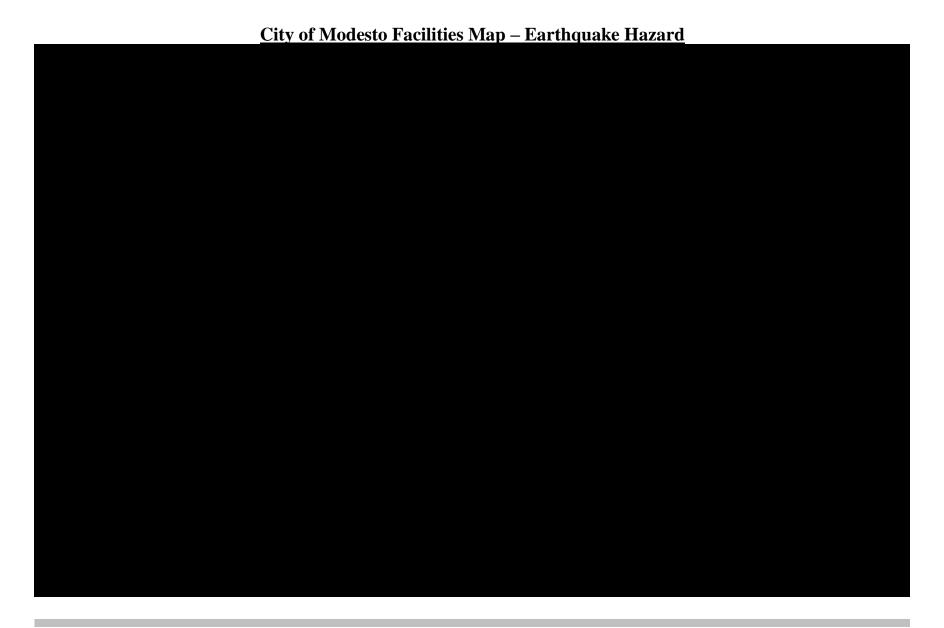


Legend

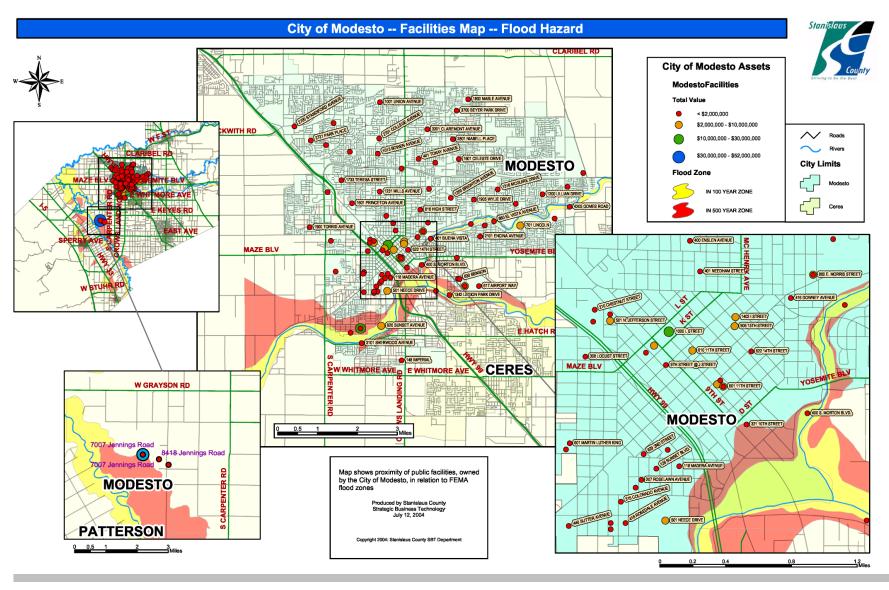
§201.6(c)(3)(ii) Identification and Analysis of Mitigation Actions

A. Does the **new or updated** plan identify and analyze a comprehensive range of specific mitigation actions and projects for each hazard?

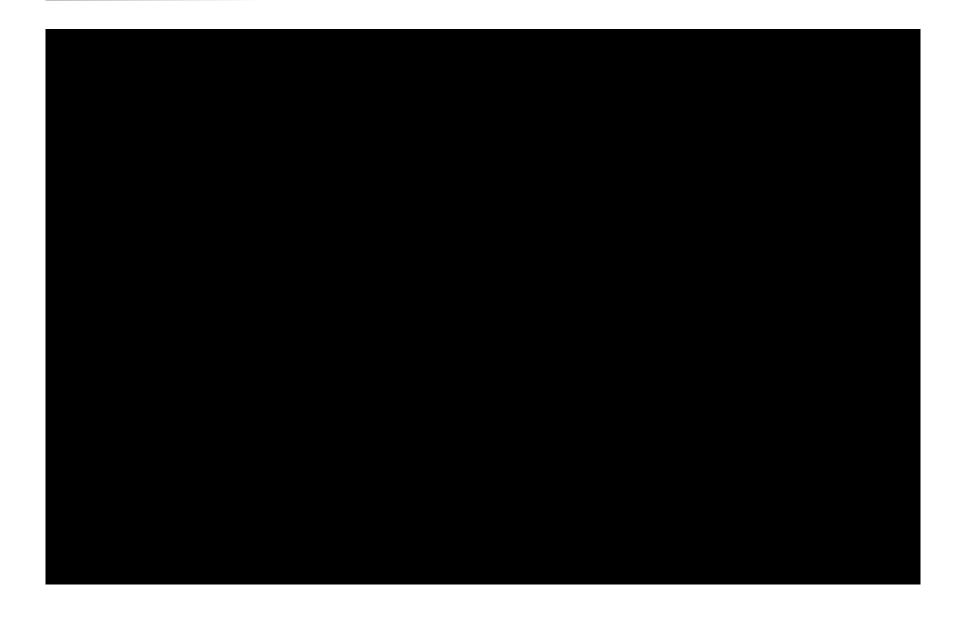
MAPS



City of Modesto Facilities Map - Flood Hazard



<u>City of Modesto Facilities Map – Dam Inundation Hazard #1</u>



<u>City of Modesto Facilities Map – Dam Inundation Hazard #2</u>



Modesto Facilities Inventory

DOUBLE CLICK ON THE "INDIVIDUAL PROPERTY SCHEDULE" ON THE NEXT PAGE TO VIEW FULL DOCUMENT

PREPARED BY Alliant Insurance Services, Inc. INDIVIDUAL PROPERTY SCHEDULE CITY OF MODESTO

Page 1

Includes B & M

1301 Dove Street Suite 200

Newport Beach, CA 92660 (949) 756-0271

March 22, 2010

Real Property Trend Factor: Personal Property Trend Factor: 0.00%

0.00%

Loc 2nd # ld	Address, City, Zip	Occupancy	Construction	Auto Y Spkir B	ear Year wilt App		Zone	Real Prop	Pers Prop	BI/ Rents	Year	Real Property	Personal Property	BI/ Rents	Totals
4	STORAGE BUILDING	3,840 SQ. FT.	Class: D	No	1948	EQ:	G	No	No	No	2009	\$163,808	\$88,262	\$0	\$252,070
	321 10TH STREET	WAREHOUSE/STORAGE	ALL COMB (WOOL	D FRAME)		Flood	:X	Yes	Yes	Yes	2010	\$163,808	\$88,262	\$0	\$252,070
	MODESTO CA 95351														
	Stories: 1	Pct. Sprnkl: 0%													
Lat: 37.634051	Lng120.992659														
5	POLICE HEADQUARTERS	41,130 SQ. FT.	Class: D	Yes	2000 20	009 EQ:	G	No	No	No	2009	\$6,976,098	\$1,304,082	\$0	\$8,280,180
	GOVERNMENTAL BUILDING	ADMINISTRATIVE OFFICES	ALL COMB (WOOL	D FRAME)		Flood	: X	Yes	Yes	Yes	2010	\$6,976,098	\$1,304,082	\$0	\$8,280,180
	600 10TH STREET	PREV. LOC. 9.										- , ,	. , ,	_	. , ,
ISO Code: 1	MODESTO CA 95354	Pct. Sprnkl: 100%													
	Stories: 2														
Lat: 37.636633	Lng120.995729														
7	PUBLIC PARKING GARAGE	84,180 SQ. FT.	Class: B	No	1981 19	997 EQ:	G	No	No	No	2009	\$4,222,852	\$0	\$0	\$4,222,852
	915 11TH STREET	PARKING STRUCTURE	ALL REINFORCED	CONCRE	TE	Flood	:X	Yes	Yes	Yes	2010	\$4,222,852	\$0	\$0	\$4,222,852
	MODESTO CA 95354														
		Pct. Sprnkl: 0%													
Lat: 37.640410	Lng120.998405														
9	LOSS OF RENTS	0 SQ. FT.	Class: ZZ	No	N/A	EQ:	G	No	No	No	2009	\$0	\$0	\$1,400,000	\$1,400,000
	600 10TH STREET	LOSS OF RENTS - VARIOUS	(N/A)			Flood	: X	Yes	Yes	Yes	2010	\$0	\$0	\$1,400,000	\$1,400,000
	MODESTO CA 95354	LOCATIONS													
	Stories: N/A														
Lat: 37.636633	Lng120.995729	Pct. Sprnkl: 0%													
10	TELEPHONE EQUIPMENT	0 SQ. FT.	Class: ZZ	No	N/A	EQ:	G	No	No	No	2009	\$0	\$607,557	\$0	\$607,557
	600 10TH STREET	TELEPHONE EQUIPMENT -	(N/A)			Flood	: X	Yes	Yes	Yes	2010	\$0	\$607,557	\$0	\$607,557
	MODESTO CA 95354	VARIOUS LOCATIONS													
	Stories: N/A	#61743													
Let: 37.636633	Lng120.995729	Pct. Sprnkl: 0%													
13	POLICE DEPT. EVIDENCE	14.000 SQ. FT.	Class: M	No	0	EQ:	G	No	No	No	2009	\$947,298	\$0	\$0	\$947,298
	11TH AND G STREETS	POLICE DEPARTMENT	MIXED NON-COM			Flood		Yes	Yes	Yes					
	MODESTO CA 95354	. 22.36 VEI PHINNEN									2010	\$947,298	\$0	\$0	\$947,298
	= 0000 TO OR 2000	Pct. Sprnkl: 0%													
Let: 37.638330	Lng120.995910														
	-														